Chapter 9 Noise

This chapter describes current noise sources and levels in the project area, and noise levels that may be created by the construction, operation and maintenance of the action alternatives.

Words in **bold** and acronyms are defined in Chapter 32, Glossary and Acronyms.

9.1 Affected Environment

9.1.1 Noise Definitions and Limits

Noise is commonly defined as unwanted sound that disrupts normal human activities or diminishes the quality of the human environment. Transient noise sources, such as passing aircraft or motor vehicles, produce noise usually of short duration. Stationary sources such as urban freeways, commercial and industrial facilities, and transmission lines, substations and transformers can emit noise over a longer period. Ambient noise at any one location is all noise generated by typical sources such as traffic, neighboring businesses or industries, and weather (wind or rain). The ambient noise level is typically a mix of noise from natural and manmade sources that may be near or distant.

Noise is usually expressed in **decibels** on the A-weighted scale (dBA), which corresponds to how humans hear sound (see Table 9-1 for typical noise levels for common sources, expressed in dBA). Noise exposure depends on the amount of time an individual spends near the source and distance from the source.

Table 9-1 Common Noise Levels

Noise Source or Effect	Sound Level (dBA[1])
Rock-and-roll band	110
Truck at 50 feet	80
Gas lawnmower at 100 feet	70
Normal conversation indoors	60
Moderate rainfall on foliage	50
BPA 500-kV transmission line	49[2]
Refrigerator	40
Bedroom at night	25

Notes:
1. Decibels (A-weighted)
2. Reflects typical noise levels at the edge of right-of-way during foul weather, when **corona** is most likely to be present.

Sources: USDOE 1986, 1996

The federal government and some states have established noise limits. At the federal level, the EPA has established a guideline of 55 dBA for an average day–night noise level (L_{dn}) in outdoor areas (EPA 1978). Washington has similar limits of maximum permissible noise levels of 60 dBA (L_{dn}) and 50 dBA (night-time) to intrude into residential property (WAC 173-60). These levels apply to new transmission lines that operate continuously. Oregon allows an L_{50} noise level of

ambient +10 dBA (not to exceed 55 dBA) in daytime and ambient +10 dBA (not to exceed 50 dBA) at night, assuming a new noise source on a previously unused site (OAR 340-035). The cities and counties crossed by the action alternatives either do not have established noise limits or defer to the states or the federal government for noise limits.

BPA has established a transmission line design criterion for corona-generated noise (L_{50}, foul weather; refers to a sound level exceeded 50 percent of the time) of 50 dBA at the edge of the right-of-way for new transmission lines (USDOE 2010). An exception to the 50 dBA criterion is allowed when there is an existing line (or lines) on the right-of-way with noise levels above 50 dBA. In such cases, a new line may not cause the L_{50} noise level to increase by more than 3 dBA over current levels. Likewise, BPA's design criterion for substation noise is 50 dBA at a substation property line. Besides meeting Washington's code limits, these design criteria are considered to be consistent with Oregon's regulatory limits.

9.1.2 Existing Noise

Throughout the project area, noise levels can vary widely. Ambient noise levels may be intermittently high in urban areas such as Longview and Vancouver, Washington, particularly near industrial and commercial uses and highways, but consistently low or moderate elsewhere, depending on suburban and rural population, wind levels, aircraft traffic, and recreation (authorized or unauthorized), forest, or agricultural activities.

In some areas, existing transmission lines may contribute to this noise. This is particularly true of higher voltage (345-kV or higher) lines built before 1978, when noise limits were being established by Washington and Oregon. During foul weather, these older transmission lines can generate noise, which is created by corona. Corona is the partial electrical breakdown of the insulating properties of air around the conductors of a transmission line. Corona-generated noise is usually heard as a hissing or crackling sound accompanied by a hum under certain conditions. Based on several years' meteorological records (2005-2009) from the Portland International Airport, foul weather conditions occur about 20 percent of the time in the general project area (NOAA 2010a). (Continuous hourly meteorological records were not found for other locations in the project area.)

Currently, high-voltage transmission line conductors are designed to be corona free under ideal conditions. Nonetheless, noise from transmission lines still can occur when conductors are wet during foul weather (periods of rain, fog, snow, or icing). On rare occasions, insects and dust on conductors also can cause occasional corona during fair weather.

Some existing substations in the project area may contribute noise as well, mainly caused by transformer equipment that creates a 120-Hz (less than 50 dBA) hum or the infrequent sound of opening and closing circuit breakers.

9.2 Environmental Consequences

General impacts that would occur for all action alternatives, and impacts by specific action alternatives, are defined and discussed below.

9.2.1 Impact Levels

Impacts would be **high** where project activities would cause the following:

- Construction activities would be temporary and infrequent, but increase ambient noise levels in a localized area over a longer period of time or a larger geographical area over a shorter period of time.
- Corona noise would consistently exceed allowed L_{50} levels (per noise criteria and limits).

Impacts would be **moderate** where project activities would cause the following:

- Construction activities would be temporary and infrequent, but increase ambient noise levels in a localized area over a shorter period of time.
- Corona noise is expected to increase existing noise levels and would occasionally exceed allowed L_{50} levels (per noise criteria and limits).
- Maintenance activities would be temporary and infrequent and include the use of loud equipment or power equipment, causing ambient noise levels to increase in a localized area over a short period of time.

Impacts would be **low** where project activities would cause the following:

- Construction activities would be temporary and infrequent, but increase ambient noise levels immediately adjacent to the construction site.
- Corona noise is expected to increase existing noise levels slightly, but that increase would barely be discernible (within 3 dBA of existing levels) and would meet allowed L_{50} levels (per noise criteria and limits).
- Maintenance activities would be temporary and infrequent, but increase ambient noise levels in a localized area over a short period of time.

No impact would occur if corona noise or noise from construction and maintenance activities is expected to cause no increase in existing noise levels.

9.2.2 Impacts Common to Action Alternatives

9.2.2.1 Construction

Construction of the transmission line, substations, and access roads would generate temporary noise that could affect nearby residences, business owners, employees and customers, visitors and recreationists. Though project construction would occur over 30 months, most transmission line construction activities would last only days or a few weeks at any one location, a **low-to-moderate** impact. Noise impacts from construction of the 500-kV substations, which would take about 13 months, and would occur at the substation locations the entire time, would cause **moderate-to-high** impacts. Potentially loud equipment would not be used during all construction phases.

Although daytime construction activities are excluded from noise limits and line construction activities would be temporary, BPA did evaluate these noise impacts. The project would be built

primarily using conventional construction equipment (see Table 9-2). Construction activities that would create noise include right-of-way clearing, access road construction and improvement, substation pad grading, excavation for tower footings, assembling and lifting towers into place, helicopter assistance during tower installation and stringing of conductors, and blasting in bedrock (if needed).

Table 9-2 Construction Equipment Noise Levels

Type of Equipment	Maximum dBA[1] at 50 Feet
Road Grader	85
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Crane	85
Combined Equipment	89

Notes:
1. Decibels (A-weighted)
Source: Thalheimer 1996

When determining noise levels, an equivalent sound level (L_{eq}) is generally accepted as the average sound level perceived by the human ear from any noise source. The overall noise caused by conventional construction equipment is estimated to be 89 dBA L_{eq} at 50 feet, dissipating with distance (see Table 9-3).

Table 9-3 Construction Equipment Noise Levels by Distance from Construction Site

Distance from Construction Site (feet)	Hourly L_{eq} (dBA[1])
50	89
100	83 (similar to truck at 50 feet)
200	77
400	71 (similar to gas lawnmower at 100 feet)
800	65
1,600	59 (similar to indoor conversation)

Notes:
1. Decibels (A-weighted)
Assumptions: Equipment used was one each—grader, bulldozer, heavy truck, backhoe, pneumatic tools, concrete pump, crane. Reference noise level of 89 dBA (L_{eq}). Distance for the reference noise level: 50 feet. Noise **attenuation** rate: 6 dBA/doubling of distance. This calculation does not include the effects, if any, of local shielding or atmospheric attenuation.

A helicopter may be used to assist with tower installation. A loaded cargo helicopter flying 250 feet away produces about 95 dBA, which is the same amount of noise produced by a diesel locomotive 100 feet away (Helicopter Association International 1993). If a helicopter is used,

towers would be preassembled at one or more central staging areas and then transferred by helicopter to tower sites. The helicopter would hover at central staging areas for 2 to 5 minutes per tower as it picked up each tower section, and would then hover at each tower site for 2 to 10 minutes during a 1-hour period while the tower is placed on the foundation.

Noise generated during construction would depend on the equipment being used, tasks being performed, and nearby topography. In general, construction of the transmission line would produce temporary elevated noise levels that would be heard by people living or working throughout the project area. People living in more rural areas (the predominant land use crossed by the action alternatives) may hear the noise from greater distances while those in more urban areas may not hear the noise over other urban sounds. The short duration of noise from construction activities, the limited number of days or weeks it may occur in any one location, and its presence only during daytime hours would mean overall **low-to-moderate** impacts. Residents, recreationists, and workers near substation sites, particularly residents near the Monahan Creek substation site, may experience **moderate-to-high** noise impacts because construction activities would occur over a longer period.

Blasting could be required in rocky areas where conventional excavation for tower footings or substation facilities would be impractical. Where blasting might occur, the explosion would produce a short noise like a thunderclap that could be audible for a mile or more. These disturbances would be **high** impacts, but temporary and infrequent.

9.2.2.2 Transmission Line Operation and Maintenance

Once operating, the impact of corona-generated audible noise by the project depends on the level of corona noise, the level of ambient noise, and proximity to the new transmission line. Corona noise itself depends on voltage, line configuration, the number of transmission lines sharing the right-of-way, and weather. Also, for a few months after construction, residual grease or oil can cause water to bead up on the surface of conductors, producing temporarily higher levels of audible noise. Though foul weather may induce corona, it can also mask it by increasing ambient noise (due to wind or heavy rain hitting foliage). Also during such conditions, people are more likely to be indoors where sound from nearby transmission lines would be reduced. Both these factors reduce corona-generated noise even in populated areas, where ambient noise levels tend to be higher.

Potential corona noise levels for the project at the edges of transmission line rights-of-way were calculated and then compared with BPA's design criteria, state noise limits, and federal noise guidelines. (Methodology used for calculations, and detailed calculations within each action alternative can be found in Appendix F.)

Corona activity also increases with altitude. For every 1,000-foot gain in elevation, noise generally increases by 1 dBA. For the action alternatives, 62 percent of transmission line conductors would be at elevations below 1,000 feet; 94 percent would be below 2,000 feet (see Figure 20-1). Most of the population along the alternatives is at lower elevations.

Since all design criteria and noise limits would be met, there would be **no-to-low** impacts from transmission line operation.

Each tower and line would be inspected by field crews at least once annually. Twice a year a helicopter would patrol the transmission line corridor to look for problems. If repairs are needed, field vehicles would be dispatched to access trouble spots.

BPA would also need to maintain vegetation along the line for safe operation and to allow access to the line. This can require using chainsaws, roller choppers, and brush hogs. Before conducting vegetation maintenance, BPA would typically send notices to landowners.

Occasional maintenance activities along the line would generate infrequent and temporary higher noise levels that would generally be a **low** impact. The exception would be when loud equipment such as chainsaws may be required, causing a temporary **moderate** impact.

9.2.2.3 Substation Operation and Maintenance

Audible noise levels at the proposed substations would predominantly reflect foul weather corona noise from incoming and outgoing transmission lines (see Section 9.2.2.2, Transmission Line Operation and Maintenance). Though transformers can hum, no transformers would be installed at the substations for this project. The operation of circuit breakers can generate a loud but short, temporary, burst of noise, a **low** impact. **No** noise impacts would occur from most maintenance activities inside the substation.

Like transmission lines, substations are continually inspected. Helicopters doing routine aerial inspections as described above would also fly over substations. Maintenance crews on the ground would inspect and fix any problems identified and conduct routine maintenance. Vegetation inside and outside the substations is strictly controlled similar to transmission line rights-of-way. Any noise generated by these actions would be a temporary, **low** impact.

9.2.2.4 Sundial Substation

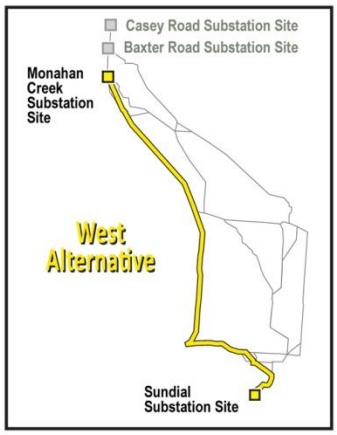
Although the substation, access roads, and line changes would occur in mostly non-forested open space, the area is within an industrial complex and close to two airports. Sundial Substation would meet BPA's 50 dBA design criteria at the substation perimeter and all state noise limits and federal guidelines. As described above, there would be **no-to-moderate** impacts during construction and operation and maintenance of the substation.

9.2.3 Castle Rock Substation Sites

The proposed substation sites, which would be on forest land (Casey Road and Baxter Road), and open space and rural land (Monahan Creek) would meet BPA's 50 dBA design criteria at the substation perimeters and all state noise limits and federal guidelines. There would be **no to-moderate** impacts during construction and operation and maintenance of these substations. Noise impacts could be considered higher at the Monahan Creek site since it is surrounded by residential land uses.

Impacts common to action alternatives are in Section 9.2.2. The remaining sections discuss impacts unique to each alternative, and recommended mitigation measures.

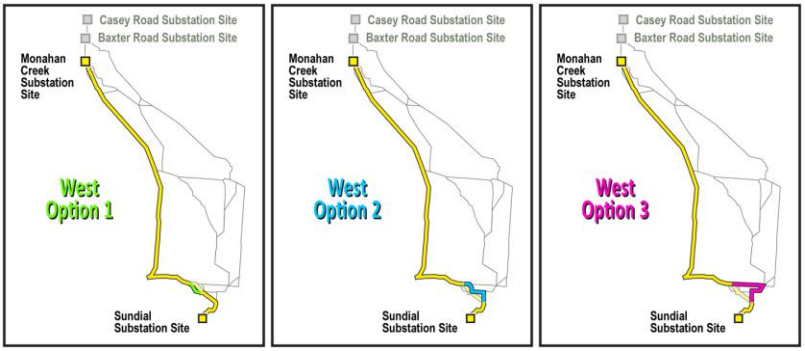
9.2.4 West Alternative and Options



The West Alternative and its options would meet all design criteria and noise limits, and would have **no-to-low** impacts from transmission line noise. The West Alternative and options would use predominantly (98 percent) existing right-of-way with the remaining using new right-of-way (i.e., areas with no existing transmission lines), crossing predominantly forest land and rivers, lakes and wetlands (51 percent) and agricultural land (33 percent). The West Alternative would cross slightly more urban, suburban, and rural development areas (17 percent) than the other action alternatives. Beyond the right-of-way—from the right-of-way edge out to 1,000 feet on either side of the line—the West Alternative and options would also cross near a greater percentage of property zoned for residential use: about 46 percent.

In new right-of-way, L_{50} audible noise levels at the edge would be 47 dBA (see Table 9-4). This level would drop about 3 dBA for every doubling of distance away from the line; e.g., a 47 dBA level at the edge of right-of-way would drop to 44 dBA at 150 feet and to 40 dBA by 330 feet from the centerline. This latter level is 15 dBA below the EPA outdoor noise limit. Consequently most, if any, noise impacts occur within about 300 feet of the edge of the right-of-way.

Land uses crossed by the action alternatives, and zoning within 1,000 feet of the transmission line provide information about the relative differences (or similarities) among alternatives (Golder 2011). However, noise impacts from the alternatives were not weighted by land use or zoning crossed because there is not an established relationship between the two. People living in populated areas may be more adapted to higher ambient noise levels and so may be less sensitive to additional audible noise.



Based on the summaries of foul weather audible noise levels on existing right-of-way, the West Alternative and options would create increases in potential corona noise up to 7 dBA (West Alternative would be 5 dBA). Even with these increases, the alternative and options would still meet BPA's 50 dBA design criteria and the statutory limits established in Oregon and Washington.

Some individual route segments within the West Alternative would exceed 50 dBA, but are not seen in the averages in Table 9-4. These segments are identified in tables in Appendix F. In all cases where the 50 dBA criterion could be exceeded, the change from existing noise levels would differ by at most 3 dBA.

During foul weather, the West Alternative and options would meet the EPA's 55 dBA guideline for L_{dn} at the edge of the right-of-way. During fair weather, which occurs about 80 percent of the time, audible noise levels at the edge of the right-of-way would be about 20 dBA lower if

corona were present at all. In quieter, open space areas, hikers on trails that cross the West Alternative's and options' right-of-way would experience temporarily higher noise levels (see Appendix F). Off the right-of-way, potential L_{50} foul weather corona noise created by the West Alternative would generally be well below the 55 dBA level that can interfere with speech outdoors. In a few segments where existing noise levels are already above 50 dBA, the West Alternative could create L_{50} levels near or slightly above 55 dBA.

Table 9-4 Summary of L_{50} Foul Weather Audible Noise Levels

		Audible Noise (dBA) at Edge of Right-of-Way[1]				Audible Noise (dBA) at Edge of Right-of-Way[1]	
Right-of-Way	Length (miles)[2]	Proposed Action	No Action	Right-of-Way	Length (miles)[2]	Proposed Action	No Action
West Alternative				**Central Alternative**			
New	1.4	47	—	New	69.5	47	—
Existing	64.2	48	42	Existing	6.8	47	42
West Option 1				**Central Option 1**			
New	2.0	47	—	New	0	—	—
Existing	1.1	47	40	Existing	2.5	53	52
West Option 2				**Central Option 2**			
New	1.7	47	—	New	15	47	—
Existing	7.3	49	47	Existing	0.4	47	41
West Option 3				**Central Option 3**			
New	1.5	47	—	New	14.9	47	—
Existing	11.5	50	49	Existing	0	—	—
East Alternative				**Crossover Alternative**			
New	67.7	47	—	New	42.7	47	—
Existing	6.8	47	41	Existing	29.7	48	40
East Option 1				**Crossover Option 1**			
New	17.6	47	—	New	0.7	47	—
Existing	0	—	—	Existing	6.6	47	37
East Option 2				**Crossover Option 2**			
New	23.5	47	—	New	0	—	—
Existing	0	—	—	Existing	4.1	56	57
East Option 3				**Crossover Option 3**			
New	1.9	47	—	New	0	—	—
Existing	1.8	50	48	Existing	4.2	54	54

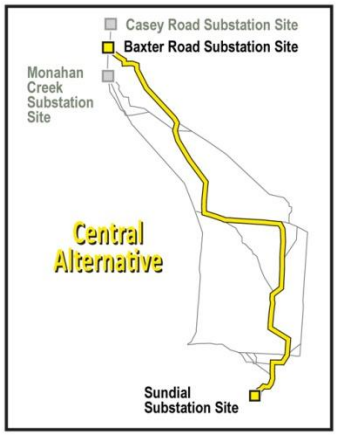
Notes:

1. Audible noise levels are the distance-weighted means of the L_{50} foul weather levels at the edge of the right-of-way. The highest average value from the two edges is shown. Audible noise levels are computed for average voltages and average conductor heights.

2. The total lengths include only those segments used in the calculation of averages and, in some cases, are slightly less than the lengths in Table 4-1.

Source: Bracken 2011 (see Appendix F)

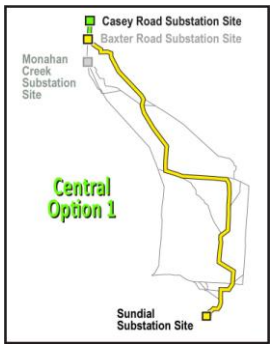
9.2.5 Central Alternative and Options

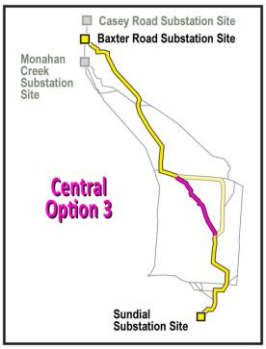


The Central Alternative and its options would meet all design criteria and noise limits, and would have **no-to-low** impacts from transmission line noise. The Central Alternative and options would primarily use new right-of-way (about 90 percent), which would cross predominantly forest land and rivers, lakes and wetlands (about 90 percent of land use crossed). Only 3 percent of the land crossed by the Central Alternative's and options' right-of-way would be in urban, suburban, or rural development areas. Beyond the right-of-way (out to 1,000 feet on both sides), the percentage of nearby residential property is also small: about 14 percent is zoned residential.

Where the Central Alternative and options would occupy new right-of-way, L_{50} audible noise levels at the edge would be 47 dBA. This level would drop about 3 dBA for every doubling of distance away from the line; e.g., a 47 dBA level at the edge of right-of-way would drop to 44 dBA at 150 feet and to 40 dBA by 330 feet from the centerline. This latter level is 15 dBA below the EPA outdoor noise limit. Consequently most, if any, noise impacts occur within about 300 feet of the edge of the right-of-way.

Based on the summaries of foul weather audible noise levels (see Table 9-4), when on existing right-of-way, the Central Alternative and options would create increases in potential corona noise up to 7 dBA (Central Alternative would be 5 dBA). Even with the increases, the Central Alternative and Central Option 2 and 3 would still meet BPA's 50 dBA design criteria and the statutory limits established in Oregon and Washington.





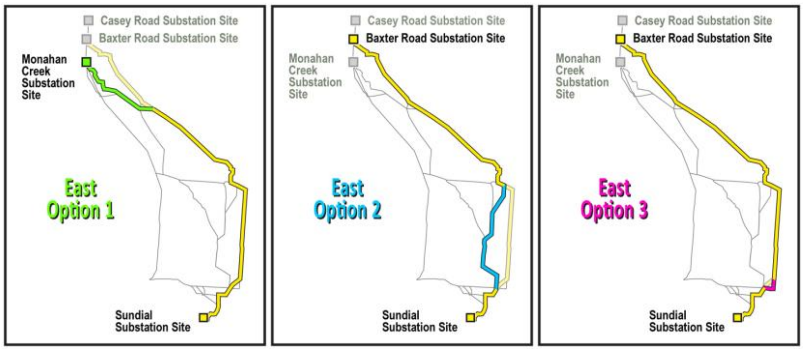
Central Option 1, where older lines would remain on the right-of-way, would exceed the 50 dBA criterion for L_{50} levels, but would meet the second criterion—falling within the maximum 3 dBA increase allowed.

During foul weather, the Central Alternative and options would meet the EPA's 55 dBA guideline for L_{dn} at the edge of the right-of-way. During fair weather, which occurs about 80 percent of the time, audible noise levels at the edge of the right-of-way would be about 20 dBA lower if corona were present at all. For example, in quieter open space areas, hikers on trails that cross the Central Alternative's and options' right-of-way would experience temporarily higher noise levels (see Appendix F). Off the right-of-way, potential L_{50} foul weather corona noise created by the Central Alternative would generally be well below the 55 dBA level that can interfere with speech outdoors. In a few segments where existing noise levels are already above 50 dBA, the Central Alternative could create L_{50} levels near or slightly above 55 dBA.

9.2.6 East Alternative and Options

The East Alternative and its options would meet all design criteria and noise limits, and would have **no-to-low** impacts from transmission line noise. The East Alternative and options would primarily use new right-of-way (about 90 percent), which would cross predominantly forest land and rivers, lakes, and wetlands (about 90 percent of land use crossed). Only 4 percent of the land crossed by the East Alternative's and options' right-of-way would be in urban, suburban, or rural development areas. Beyond the right-of-way (out to 1,000 feet), the percentage of nearby residential property is the lowest of all action alternatives: about 7 percent is zoned residential.

Where the East Alternative and options would occupy new right-of-way, L_{50} audible noise levels at the edge would be 47 dBA. This level would drop about 3 dBA for every doubling of distance away from the line; e.g., a 47 dBA level at the edge of right-of-way would drop to 44 dBA at 150 feet and to 40 dBA by 330 feet from the centerline. This latter level is 15 dBA below the EPA outdoor noise limit. Consequently most, if any, noise impacts occur within about 300 feet of the edge of the right-of-way.

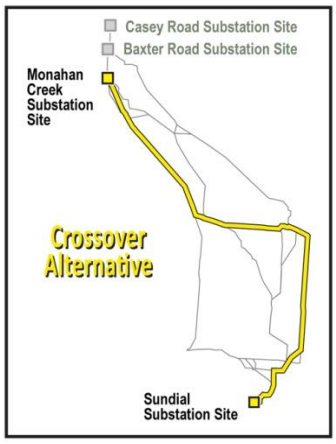


Based on the summaries of foul weather audible noise levels (see Table 9-4), when on existing right-of-way, the East Alternative and options would create increases in potential corona noise up to 6 dBA (East Alternative would create the highest increase at 6 dBA). Even with the increases, the alternative and options would still meet BPA's 50 dBA design criteria and the statutory limits established in Oregon and Washington.

During foul weather, the East Alternative and options would meet the EPA's 55 dBA guideline for L_{dn} at the edge of the right-of-way. During fair weather, which occurs about 80 percent of the time, audible noise levels at the edge of the right-of-way would be about 20 dBA lower if corona were present at all. For example, in quieter open space areas, hikers on trails that cross the East Alternative's and options' right-of-way would experience temporarily higher noise levels (see Appendix F). Off the right-of-way, potential L_{50} foul weather corona noise created by the Central Alternative would generally be well below the 55 dBA level that can interfere with speech outdoors. In a few segments where existing noise levels are already above 50 dBA, the East Alternative could create L_{50} levels near or slightly above 55 dBA.

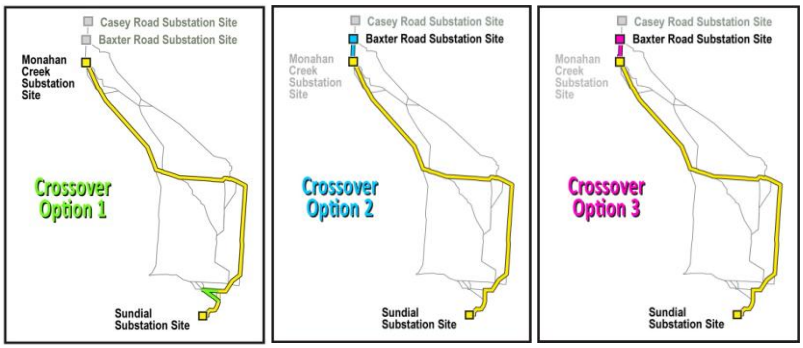
9.2.7 Crossover Alternative and Options

The Crossover Alternative, Crossover Option 1, and Crossover Option 3 would meet all design criteria, and would have **no-to-low** impacts from transmission line noise. Crossover Option 2 exceeds EPA noise guidelines by 1 dBA, but does so on Segment C which crosses through forest;



no change in noise level from the existing situation would be discernible. The Crossover Alternative and options would require about 58 percent new right-of-way, which would cross predominantly forest land and rivers, lakes, and wetlands (about 76 percent). About 8 percent of the land crossed by the Crossover Alternative's and options' right-of-way would be urban, suburban, and rural development areas. Beyond the right-of-way (out to 1,000 feet), the Crossover Alternative and options would cross near about 14 percent residential-zoned land.

Where the Crossover Alternative and options would occupy new right-of-way, L_{50} audible noise levels at the edge would be 47 dBA. This level would drop about 3 dBA for every doubling of distance away from the line; e.g., a 47 dBA level at the edge of right-of-way would drop to 44 dBA at 150 feet and to 40 dBA by 330 feet from the centerline. This latter level is 15 dBA below the EPA outdoor noise limit. Consequently most, if any, noise impacts occur within about 300 feet of the edge of the right-of-way.



Based on the summaries of foul weather audible noise levels (see Table 9-4), when on existing right-of-way, the Crossover Alternative and options would create increases in potential corona noise up to 10 dBA (Crossover Alternative would be 7 dBA). Even with the increases, the Crossover Alternative and Crossover Option 1 would still meet BPA's 50 dBA design criteria and the statutory limits established in Oregon and Washington.

Crossover Option 2 and 3, where older lines would remain on the right-of-way, would exceed the 50 dBA criterion for L_{50} levels, but would meet the second criterion—falling within the maximum 3 dBA increase allowed.

During foul weather, the Crossover Alternative and options would meet the EPA's 55 dBA guideline for L_{dn} at the edge of the right-of-way. During fair weather, which occurs about 80 percent of the time, audible noise levels at the edge of the right-of-way would be about 20 dBA lower if corona were present at all. For example, in quieter open space areas, hikers on trails that cross the Crossover Alternative's and options' right-of-way would experience temporarily higher noise levels (see Appendix F). Off the right-of-way, potential L_{50} foul weather corona noise created by the Crossover Alternative would generally be well below the 55 dBA level that can interfere with speech outdoors. In a few segments where existing noise levels are already above 50 dBA, the Crossover Alternative could create L_{50} levels near or slightly above 55 dBA.

9.2.8 Recommended Mitigation Measures

Mitigation measures included as part of the project have been identified (see Table 3-2). The following additional mitigation measures have been identified to further reduce or eliminate adverse noise impacts by the action alternatives:

- Limit construction activities to daytime hours
- Incorporate conductor and line designs that result in acceptable corona performance

9.2.9 Unavoidable Impacts

After appropriate mitigation actions have been taken, the project would still produce temporary noise impacts during construction and maintenance. Corona noise would also periodically be heard along the right-of-way during foul weather. If an alternative is chosen that occupies new right-of-way, an unavoidable new source of noise from operation of the line would occur. New sources of noise may also occur on new rights-of-way from unauthorized uses such as ATVs, snowmobiles, and target practice.

9.2.10 No Action Alternative

Under the No Action Alternative, current transmission line noise levels at the edges of existing rights-of-way would continue to range from ambient to 57 dBA throughout the project area (see Table 9-4). There are 20 existing BPA, utility and privately owned transmission lines in the area. The highest corona noise levels occur on older 500-kV lines.

Noise impacts from maintenance of existing lines, substations, and access roads would continue unchanged. Also, noise impacts that may be occurring from unauthorized access and use of existing BPA rights-of-way in the project area would likely continue to occur unless actions were developed and implemented to prevent the unauthorized access and use.